1. Find all six (sin, cos, tan, csc, sec, cot) trigonometric values of θ with the given conditions. Give exact answers (fractions, not decimals):

   a) $\cos\theta = -\frac{15}{17},\ \sin\theta > 0$ b) $\tan\theta = -1,\ \sin\theta < 0$

2. Sketch the graph of each function. State its domain, range, period and amplitude:

   a) $y = 3\csc(3x + \pi) - 2$ b) $y = 2\sin(4x + \pi) + 3$

3. Give the measure of the angle in radians and degrees. Give exact answers where possible:

   a) $\sin^{-1}(0.5)$ b) $\sin^{-1}(-\frac{\sqrt{2}}{2})$

   c) $\tan^{-1}(-5)$ d) $\cos^{-1}(0.7)$

4. Solve the equation in the specified interval:

   a) $\tan x = 25,\ 0 \le x \le 2\pi$ b) $\cos x = -0.7,\ 2\pi \le x \le 4\pi$

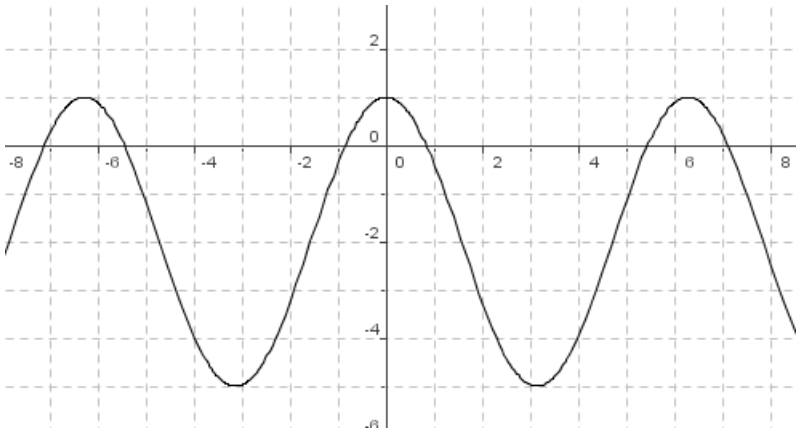
   c) $\csc x = 2,\ 0 < x < 2\pi$ d) $\sec x = -3,\ -\pi \le x < \pi$

5. Match each function with its graph. Do it without using a graphing calculator.

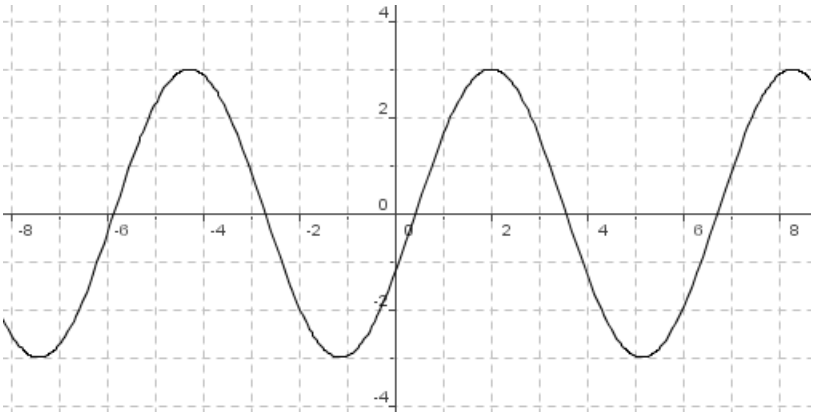
   a) $y = 3\cos(x - 2)$ b) $y = -3\sin(x) - 2$ c) $y = \sec x$

   d) $y = \sin(2x)$ e) $y = 3\cos x - 2$ f) $y = \csc x$

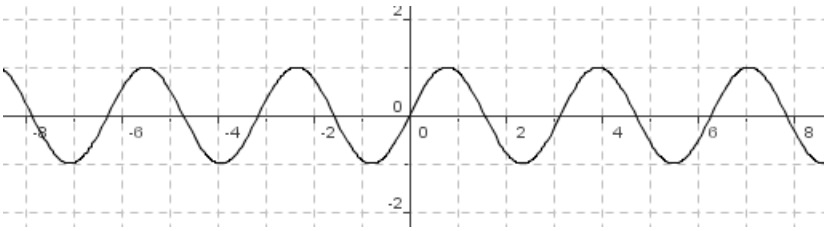
i.



ii.

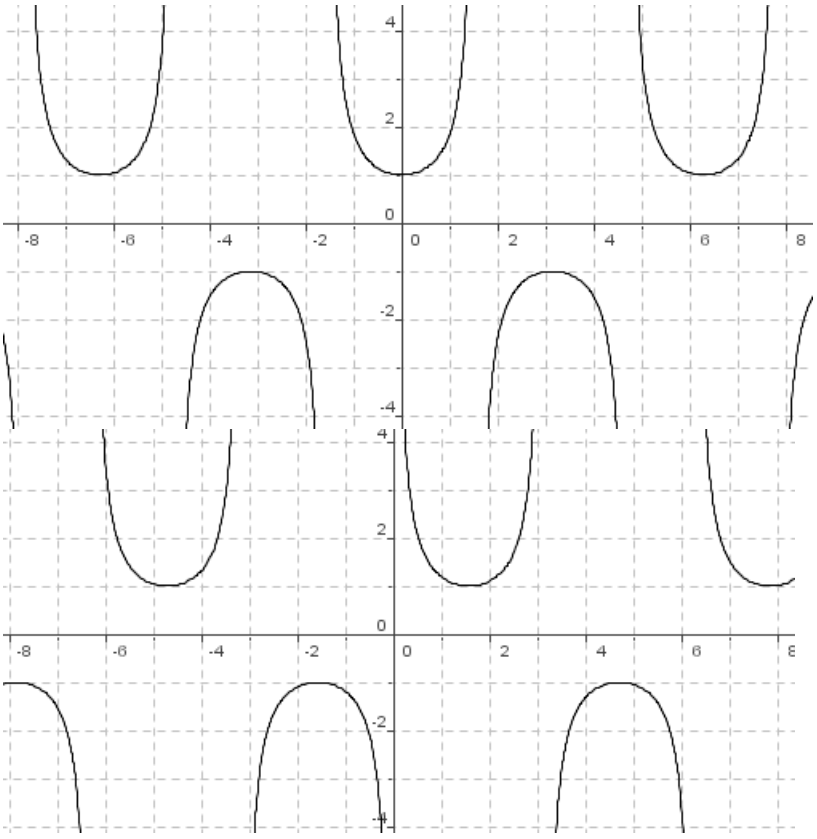


iii.



iv.

v.



vi.